AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1   1-33 (Canceled).

1   34. (Currently amended) A computer-readable storage medium storing
2   instructions that when executed by a computer cause the computer to perform a
3   method to facilitate simulating a digital circuit, the method comprising:
4   receiving a description of the digital circuit, wherein a first portion of the
5   description is in a hardware description language and a second portion of the
6   description is in a computer programming language,
7   blending the first portion and the second portion into an executable
8   simulation, wherein blending the first portion and the second portion involves
9   automatically creating a wrapper for code written in the computer programming
10   language so that code written in the hardware description language can call code
11   written in the computer programming language, and wherein the wrapper
12   facilitates automatic threading, whereby automatic threading enables the
13   executable simulation ~~compiled application code~~ to directly_call tasks in the
14   hardware description language; and
15   executing the executable simulation, wherein executing the executable
16   simulation allows a designer to simulate operation of the digital circuit.

1   35. (Previously presented) The computer-readable storage medium of
2   claim 34, wherein blending the first portion and the second portion involves

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3   mapping data types native to the hardware description language to data types

4   native to the computer programming language.

1   36 (Canceled).

1   37. (Previously presented) The computer-readable storage medium of

2   claim 34, wherein the wrapper provides data communication mechanisms between

3   code written in the hardware description language and code written in the

4   computer programming language, wherein the data communication mechanisms

5   provide mapping between types in the hardware description language and the

6   computer programming language.

1   38. (Previously presented) The computer-readable storage medium of

2   claim 34, wherein the wrapper is automatically generated.

1   39-40 (Canceled).

1   41. (Previously presented) The computer-readable storage medium of

2   claim 34, wherein the wrapper can output a message upon an occurrence of a call

3   and a return, wherein the message can include values associated with the call and

4   the return.

1   42. (Currently amended) An apparatus to facilitate simulating a digital

2   circuit, comprising:

3   a receiving mechanism configured to receive a description of the digital

4   circuit, wherein a first portion of the description is in a hardware description

5   language and a second portion of the description is in a computer programming

6   language,

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7   a blending mechanism configured to blend the first portion and the second

8   portion into an executable simulation;

9   a creating mechanism configured to automatically create a wrapper for

10 code written in the computer programming language so that code written in the

11 hardware description language can call code written in the computer programming

12 language, wherein the wrapper facilitates automatic threading, whereby automatic

13 threading enables the executable simulation ~~compiled application code~~ to directly

14 call tasks in the hardware description language; and

15   an executing mechanism configured to execute the executable simulation,

16 wherein executing the executable simulation allows a designer to simulate

17 operation of the digital circuit.

1   43. (Previously presented) The apparatus of claim 42, further comprising a

2 mapping mechanism configured to map data types native to the hardware

3 description language to data types native to the computer programming language.

1   44 (Canceled).

1   45. (Previously presented) The apparatus of claim 42, further comprising a

2 data communication mechanism configured to communicate between code written

3 in the hardware description language and code written in the computer

4 programming language, wherein the data communication mechanism provides

5 mapping between types in the hardware description language and the computer

6 programming language.

1   46. (Previously presented) The apparatus of claim 42, wherein the wrapper

2 is automatically generated.

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1   47-48 (Canceled).

1   49. (Previously presented) The apparatus of claim 42, wherein the wrapper

2 can output a message upon an occurrence of a call and a return, wherein the

3 message can include values associated with the call and the return.

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